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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/251,988	02/17/1999	BRIAN SAMUEL BEAMAN	Y0998-088	3930

7590 05/20/2002

IBM CORPORATION
INTELLECTUAL PROPERTY LAW DEPT
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EXAMINER

HOLLINGTON, JERMELE M

ART UNIT	PAPER NUMBER
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2829

DATE MAILED: 05/20/2002

18

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/251,988

Applicant(s)

BEAMAN ET AL.

Examiner

Jermele M. Hollington

Art Unit

2829

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 March 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 and 41-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 and 41-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

DETAILED ACTION

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-27 and 41-47 are, in so far as understood, rejected under 35 U.S.C. 102(e) as being anticipated by Beaman et al (5371654).

Regarding claims 1 and 41, Beaman et al discloses [see fig. 6] an interconnection package comprising a substrate (94) having a surface (102) [see column 6 line 44], a plurality of elongated electrical conductors (84) [see column 6 line 60] extending away from the surface (102) wherein the conductors (84) having a first end (represented as contact end 90) affixed to the surface (102) and a second end (represented as contact end 92) projecting away from said surface (102), there being a plurality of said second ends (92) and a means (represented as

Art Unit: 2829

connection means 80) [see column 6 lines 59-66] for positioning and maintaining said plurality of second ends (92) in substantially fixed positions.

Regarding claim 2, the first end (90) is affixed to said surface (102) at an electrical contact location (104) [see column 6 lines 42-43].

Regarding claim 3, the means (80) for positioning and maintaining is a plurality of sheets of material each inherently having a plurality of opening [not shown] therein through which said second ends (92) project.

Regarding claim 4, the second end (92) is inherently a structure selected from the group consisting of a protuberance and a sharp spike [see column 11 lines 47-56].

Regarding claim 5, the plurality of sheets (80) is formed from a material selected from the group consisting of a rigid material and a compliant [see column 6 lines 58-66].

Regarding claim 6, the sheets (80) inherently comprise a plurality of openings [not shown], said elongated electrical conductors (84) are disposed against the sides (86 and 88) [see fig. 5] or said openings [not shown] of at least two of said sheets.

Regarding claim 7, the sheets (80) are spaced apart from said surface (102) by a flexible support (82).

Regarding claim 8, the flexible support (82) is selected from the group consisting of a spring and an elastomeric material [see column 6 lines 41-43].

Regarding claim 9, the elongated electrical conductors (84) inherently have a shape selected from the group consisting of linear, piece wise linear, curved and combinations thereof [see column 11 lines 52-56].

Art Unit: 2829

Regarding claim 10, the sheet (80) and the flexible support (82) forms a space containing the plurality of elongated electrical conductors (84) [see fig. 6 and column 6 lines 28-31].

Regarding claim 11, the space is filled with a flexible material [via elastomeric material 82].

Regarding claim 12, the flexible material is an elastomeric material (82) [see column 6 lines 29].

Regarding claim 13, the sheets (80) is a sheet of electrically conductive material which inherently has a top surface (not number) and a bottom surface (not number) and said openings (not number) have side walls (86 and 88), a dielectric material inherently coats said top surface (not number) and said bottom surface (not number) and said side wall (86 and 88).

Regarding claims 14-15, the plurality of elongated electrical conductors (84) is distributed into plurality of groups that are arranged in an array [see figs. 6-8].

Regarding claim 16, the structure is a probe for an electronic device [see Abstract].

Regarding claims 17-19, the electronic device is selected from the group consisting on an integrated circuit chip [not shown but see column 1 lines 64-66] on a packaging substrate (94) containing a wafer (not number).

Regarding claim 20, the structure has means (80) for holding and moving the structure and means (94) for applying electrical signals to the elongated electrical conductors (84).

Regarding claim 21, the protuberance is sphere like [see column 11 lines 47-56].

Regarding claims 22-27 and 47, the means (80) for positioning and maintaining is a plurality of sheets of material each inherently having a plurality of opening (not number) therein through which said second ends (92) project, the plurality of sheets (80) are formed from a

Art Unit: 2829

material selected from the group consisting of a rigid material and a compliant [see column 6 lines 58-66 and column 11 lines 52-56], the sheets (80) are a sheet of electrically conductive material which inherently has a top surface (not number) and a bottom surface (not number) and said openings (not number) have a side wall (86 and 88), a dielectric material inherently coats said top surface (not number) and said bottom surface (not number) and said side wall (86 and 88), the sheet (80) and the flexible support (82) forms a space containing the plurality of elongated electrical conductors (84) [see column 6 lines 28-31].

Regarding claims 42-43, the sheet (80) is inherently formed and material selected from the groups consisting of Invar, Cu/Invar/Cu, molybdenum and polyimides [see column 3 and column 11 lines 52-56].

Regarding claim 44, the dielectric material is selected from the group consisting of a ceramic and a glass [see column 3 lines 26-28 and column 11 lines 52-56].

Regarding claims 45-46, the elongated conductor (84) is coated with a hard coat that is from a group consisting of materials as claimed (see column 3 lines 43-47).

Conclusion

The examiner will like to thank the applicant(s) for making the necessary changes to the application to further along the prosecution of this case. Applicants' arguments with respect to claims 1-27 and 41-47 have been considered. Regarding claim rejections, the examiner agrees with the applicants and withdraws the previous office action rejections using Beaman et al (5371654) reference as a rejection under 35 U.S.C. 102(b). However, Beaman et al (5371654) still reads on the claim invention as a rejection under 35 U.S.C. 102(e).

Art Unit: 2829


Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

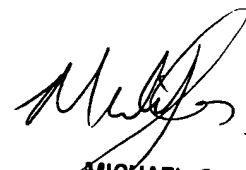
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jermele M. Hollington whose telephone number is (703) 305-1653. The examiner can normally be reached on M-F (9:00-3:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on (703) 308-1680. The fax telephone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7382 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.


JMH
May 15, 2002

 5/15/02
MICHAEL SHERRY
SUPERVISORY PATENT EXAMINER
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